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chipset **92** and other I/O device initialization, data transfers, and controls. Connections to a possible combination of connections to supported peripherals **100-108**, such as a monitor via a video port **100**, keyboard, mouse, printer or optical drive via USB ports **104**, **106**, and **108** will connect to the bus or may be integrated into a single common I/O chipset, such as a USB hub **96**. Approaches for connecting the peripherals may vary from system to system.

In tandem, the combination of the UWB or other wireless radio transceivers of the portable computer and docking station allow the peripherals connected to the dock to function as if they are directly attached to the portable computer. Bridging functions between the portable computer and the docking station, in addition to arbitration of the data streams and rates of the peripheral devices may be provided by the wireless chipset of the portable computer. Also, because UWB is able to provide a time division (time slot) mechanism, allocation of UWB bandwidth for the peripheral devices connected through the docking station can be scheduled according to need. A mapping function for each peripheral device, connected through the docking station to the operating system of the portable computer, will be provided by the driver of the portable computer in a way that the operating system has connectivity with each peripheral. The mapping function may also facilitate the control and operation of the peripherals as if they were directly attached to the portable computer.

UWB offers a flexible and secure channel of communication may be employed to allow a wireless docking station to be adjustable in terms of its reception range. For example, if users need access to a docking station for the purposes of accessing a restricted optical drive or other resource, the docking station may be configured such that it can be accessed over a longer range. Conversely, when a docking station is meant to be accessible for the purposes of equipping a tablet PC user with a full size monitor, keyboard, and mouse, it may be configured in a way that it can only be accessed by a user within one meter of the docking station. The UWB range may also be determined and preset by a system administrator to correspond to the resources that the docking station makes available. UWB transmission data rates generally correspond to the distance between the UWB devices. The effective range of a UWB docking station may be 2 meters for a resource requiring a bandwidth of 480 Mbps, 4 meters for 200 Mbps, and 10 meters for 110 Mbps. Thus, the useful range of the docking station may be adjustable depending on the resources that are available through the docking station. For instance, a docking station that only serves to provide access to a secure optical drive may function adequately up to 10 meters away, while a docking station that serves the primary purpose of providing access to peripherals and a monitor may require the portable computer to be within one meter of the docking station. Additionally, the pairing protocol may employ UWB devices that support "ranging" as specified by ECMA International Standard ECMA-368 (ISO/IEC Specification 26907) to determine the distance between UWB devices for the purpose of determining whether a docking station is within range.

FIG. **6** is a representative view of a control panel user interface **110** that may be utilized to adjust power and range settings for wireless docking sessions. The top portion of the window **112** denotes that it is a control panel window for adjusting docking station options. The lower portion of the control panel window **114** shows some of the particular docking station settings that may be adjusted. Here, the first line shows the ability to disable the wireless docking beacon

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**116** by entering a "Y" or "N." The second line shows that the wireless docking beacon may be automatically disabled to conserve power **118** when the power level of the battery of the portable computer drops below a selected level. "10%" is shown here, but this may be adjusted at the user's discretion by keying in a different number. The user may also set the distance from the wireless docking station that should be considered within range by keying in a distance on the corresponding line of the control panel window **120**. The number "01" is shown here to indicate that a wireless docking session should initiate when the portable computer is placed within one meter of the docking station, but a user could enter in a larger number if the requirements of their docking session may still be fulfilled at that distance. Alternatively, this setting could be adjusted by allowing the user to select a purpose for their docking session, such as using a monitor accessing a disk drive, and the software utility may adjust the wireless docking settings accordingly. The control panel utility may also be used to activate or deactivate encryption **122** to correspond to whether the docking session is supporting a high or low security application. Similarly, the control panel utility may be used to configure a password setting or other type of authentication for the docking station to prevent unauthorized use of the docking station and any associated resources or peripheral devices. It is also noted that while user input here is in the form of keyboard input, the control panel could be altered to give the user a limited set of options that could be adjusted through checkboxes, selectable text, or other similar software controls.

It is to be understood that the forms of the invention shown and described herein are to be taken as the presently preferred embodiments. Elements and materials may be substituted for those illustrated and described herein, parts and processes may be reversed, and certain features of the invention may be utilized independently, all as would be apparent to one skilled in the art after having the benefit of this description of the invention. Changes may be made in the elements described herein without departing from the spirit and scope of the invention as described in the following claims.

What is claimed is:

1. A portable computer, comprising:

- a wired connector adapted for engagement with a wired connector of a docking station;
- a wireless transceiver operable to transmit a ping signal across a wireless medium and receive an acknowledge signal also across the wireless medium in response to the ping signal;
- a comparator coupled to the wireless transceiver for comparing a signal strength of the acknowledge signal to a predetermined value to determine whether the signal strength is adequate to support a wireless docking session before data is transmitted across the wireless medium;
- a processor having program instructions operable thereon for controlling data transmission between the portable computer and the docking station, wherein upon execution of the program instructions, the processor is configured for transmitting data from the wireless transceiver across the wireless medium in lieu of transmitting data across the wired connectors only if the signal strength of the acknowledge signal is greater than the predetermined value and the wired connector of the portable computer is disconnected from the wired connector of the docking station.